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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,441	02/08/2001	Masahiko Maeda	Q63016	4617

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,441

Applicant(s)

MAEDA ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9,11,15 and 19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5,9,11,15 and 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 1-5, 9, 11, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh et al. (U.S. Patent 5,229,461) in view of Dessaint et al. (U.S. Patent 4,295,976).

Saitoh et al. teach a coating composition comprising a vinylidene fluoride copolymer which yields a film having excellent weatherability and stain resistance (column 1, lines 54-60). The copolymer comprises up to 30 mol% of units that may be tetrafluoroethylene or chlorotrifluoroethylene (see formula II where X is fluorine or chlorine) and units having a hydroxyl functional group (formula III) (column 2, lines 17-47). The composition further comprises a curing agent, such as an isocyanate, an amino resin, or an acid anhydride, that is reactive with the hydroxyl groups in the copolymer (column 9, lines 7-29). The coating may be applied over a primer coating, such as an acrylic coating (column 11, lines 1-11).

Regarding the stain resistance limitations in claims 1 and 2, the cracking resistance limitations in claims 3 and 4, and the hydroxyl value limitation of claim 9, these are taken to material properties of the coating composition. Since the coating composition of Saitoh et al. appears to be the same as that of the instant invention (especially since page 7, lines 17-19 of the instant specification cites the composition of JP-A-4-28707 as a suitable curable fluorine-

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containing resin and U.S. Patent 5,229,461 is an English language equivalent of JP-A-4-28707 as shown by Derwent abstract 1991-347997).

Regarding the limitations of claim 5, while Saitoh et al. is silent with respect to the weight of the coating, the coating weight of a protective coating is known to affect the degree of protection (e.g. stain resistance and weatherability). As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the weight of the coating, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Saitoh et al. do not teach applying the composition to leather, however, the composition is taught as being applied on substrates such as metal, wood, concrete, plastic, and the like (column 11, lines 5-8).

Dessaint et al. disclose that materials such as metals, plastics, wood materials, concrete, and leather are considered equivalent substrates for fluorinated anti-staining coatings (column 1, lines 5-11). That is, Dessaint et al. shows that for anti-staining fluorinated coatings metal, wood, concrete, plastic, and leather are equivalent structure substrates.

Therefore, because these substrates were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to apply the coating of Saitoh et al. to any equivalent substrate, including leather, that is desired to be rendered stain resistant.

Response to Arguments

3. Applicant's arguments filed 23 February 2005 have been fully considered but they are not persuasive.

The applicants argue that the coating composition of Saitoh et al. is a hydroxyl group containing copolymer having vinylidene fluoride units in an amount of 50 to 99 mol%. In contrast, claim 1 limits the fluorine-containing resin coating composition to a TFE resin or CTFE resin having hydroxyl group and which does not contain vinylidene fluoride units.

This is not persuasive because the fluorine-containing resin of the claims are not limited to resins which do not contain vinylidene fluoride units. While the fluorine-containing resin is limited to a TFE or CTFE resin, there is no limitation as to how much TFE or CTFE must be present in the resin and nothing to exclude the presence of other monomers such as vinylidene fluoride. This is further supported by the instant specification (see page 7, line 23-page 8, line 2) which requires only that the fluorine containing resin preferably contain not less than 20 mol% of fluorinated units (i.e. CTFE, TFE, TrFE, HFP, VDF, or VF). That is, a resin contain not less than 20 mol% of TFE or CTFE can reasonably be considered a TFE or CTFE resin for the purpose of the instant application. Since the copolymer of Saitoh et al. may contain up to 30 mol% TFE or CTFE, it may be considered a TFE or CTFE resin as the term is used in the instant application.

The applicants submit a Declaration purporting to demonstrate that the use of TFE or CTFE resin results in an unexpected improvement over the material of Saitoh et al. with respect to stain removing property and ethanol resistance.

This is not persuasive for the following reasons. The Declaration illustrates that the composition of Saitoh et al. yields a coating that meets the limitations of claim 1 with respect to the stain removing test (grey scale is grade 4) and the ethanol resistant test (chipped-off area is 50% or less). Furthermore, for the reasons outlined above, the composition of Saitoh et al. can be considered a TFE or CTFE resin because Saitoh et al. explicitly teach the inclusion of up to 30 mol% of TFE or CTFE in the copolymer. Additionally, it is not clear that the invention as claimed is commensurate in scope with the showing of the Declaration because the TFE or CTFE resin of the claims are not limited in the amount of TFE or CTFE units present (preferably not less than 20 mol% implies that resins could have less than 20 mol% TFE or CTFE and still be considered TFE or CTFE resins for the purpose of the instant invention. However, the amount of TFE and CTFE present in Examples 1, 7, and 13 are not disclosed and therefore may be considerably higher than even the preferred range of not less than 20 mol%.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700